

CLAIMS:

WHAT IS CLAIMED IS:

- Sub<sup>5</sup>  
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- 10 1. A system for routing data across heterogeneous networks comprising:  
a first network having a first protocol;  
a second network having a second protocol, wherein the second protocol is incompatible with the first protocol;  
a first device connected to the first network;  
a second device connected to the second network;  
and  
a switch coupled between the first network and the second network;  
wherein requests from the first device to the second device are formatted according to the first protocol and transmitted to the switch;  
and  
20 wherein the switch is configured to detect the requests and to reformat the requests according to the second protocol and transmit the requests to the second device.
- 25 2. The system of claim 1 wherein the first network is an out-of-band network and the second network is an in-band network.

3. The system of claim 1 wherein the switch comprises an HTTP server coupled to an HTTP client, wherein the HTTP server is configured to receive the requests formatted according to the first protocol from the first device and wherein the HTTP client is configured to forward corresponding requests formatted according to the second protocol to the second device.
4. The system of claim 1 wherein the system further comprises a default gateway coupled to the first network.
5. The system of claim 1 wherein the system further comprises a proxy server coupled to the first network.
6. The system of claim 1 wherein the system further comprises a firewall which is separate from the switch.
7. The system of claim 1 wherein the request includes an IP address corresponding to the switch and information identifying the second device and the subject of the request.
8. The system of claim 1 wherein the switch is configured to receive the requests and to identify the requests as being directed to the second device.

- 5 9. The system of claim 8 wherein each of the requests includes a keyword which indicates that the subject of the request should be forwarded to a device connected to the second network and wherein the switch is configured to identify the requests as being directed to the second device by detecting the keyword.

10. A method for routing data across heterogeneous networks comprising:

formulating a first request for data in a first device;

5 transmitting the first request to a switching device via a first network, wherein the first request is transmitted according to a first protocol;

10 formulating in the switching device a second request corresponding to the first request; transmitting the second request to a second device via a second network, wherein the second

15 request is transmitted according to a second protocol and wherein the second protocol is incompatible with the first protocol;

formulating a first response in the second device, wherein the first response is responsive to the second request;

20 transmitting the first response to the switching device via the second network, wherein the first response is transmitted according to the second protocol;

25 formulating in the switching device a second response corresponding to the first response; and

transmitting the second response to the first device, wherein the response is transmitted according to the first protocol.

11. The method of claim 10 wherein the switching device comprises a server coupled to the first network and a client coupled to the second network, wherein transmitting the first request to the switching device comprises transmitting the first request to the server and wherein formulating the second request comprises the client formulating the second request.
12. The method of claim 10 wherein the first request and the second request ask for the same data.
13. The method of claim 10 wherein the first response and the second response provide the same data.
14. The method of claim 10 wherein formulating the requests comprises formulating HTTP requests.
15. The method of claim 10 wherein transmitting the first request to a switching device comprises transmitting the first request to a device other than a default gateway.
16. The method of claim 10 wherein transmitting the first request to a switching device comprises transmitting the first request to a device other than a proxy server.

- 5 17. The method of claim 10 wherein formulating the first request comprises formulating a uniform resource locator (URL) that includes an IP address corresponding to the switching device and information identifying the subject of the request.
- 10 18. The method of claim 17 wherein formulating the first request comprises formulating a URL that further comprises an address of the second device.
- 15 19. The method of claim 10 further comprising the switching device identifying the first request as being directed to a device connected to the second network.
- 20 20. The method of claim 19 further comprising the switching device formatting the subject of the first request in the second request and forwarding the second request to the second device.
- 25 21. The method of claim 19 further comprising the switching device identifying a keyword in the first request, wherein the keyword indicates the format of the information contained in the first request.
22. The method of claim 21 further comprising parsing the information contained in the first request according to the format identified by the keyword.

23. A network interface for enabling communications between a first network having a first protocol and a second network having a second protocol comprising:

5 a server configured to receive a first request from a device on the first network, wherein the first request contains an indicator that the first request is directed to a device on the second network; and

10 a client coupled to the server and configured to receive information from the server indicating the device on the second network and the information requested from the device on the second network;

15 wherein the client is further configured to generate a second request and to transmit the second request to the device on the second network;

20 wherein the client is further configured to receive the requested information from the device on the second network and to convey the requested information to the server; and wherein the server is configured to transmit the requested information to the device on the first network.

25 24. The network interface of claim 23 wherein the server is an HTTP server, the client is an HTTP client, and the first and second requests are uniform resource locators (URLs).

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25. The network interface of claim 24 wherein the URL corresponding to the first request includes an address corresponding to the server and wherein the indicator comprises a predetermined key word.

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26. The network interface of claim 25 wherein the URL corresponding to the first request contains a URL following the key word, wherein the client is configured to produce the URL following the key word as the URL corresponding to the second request.

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27. The network interface of claim 23 wherein the TCP server is configured to detect URLs containing the key word and the TCP client is configured to generate new URLs corresponding to the detected URLs, wherein the new URLs do not contain the key word.

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28. The network interface of claim 23 wherein the client is configured to generate requests which are formatted according to a physical layer protocol that is different than the physical layer protocol according to which the first request is transmitted to the server.

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29. The network interface of claim 23 wherein the network interface comprises a switch containing the server and the client.

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